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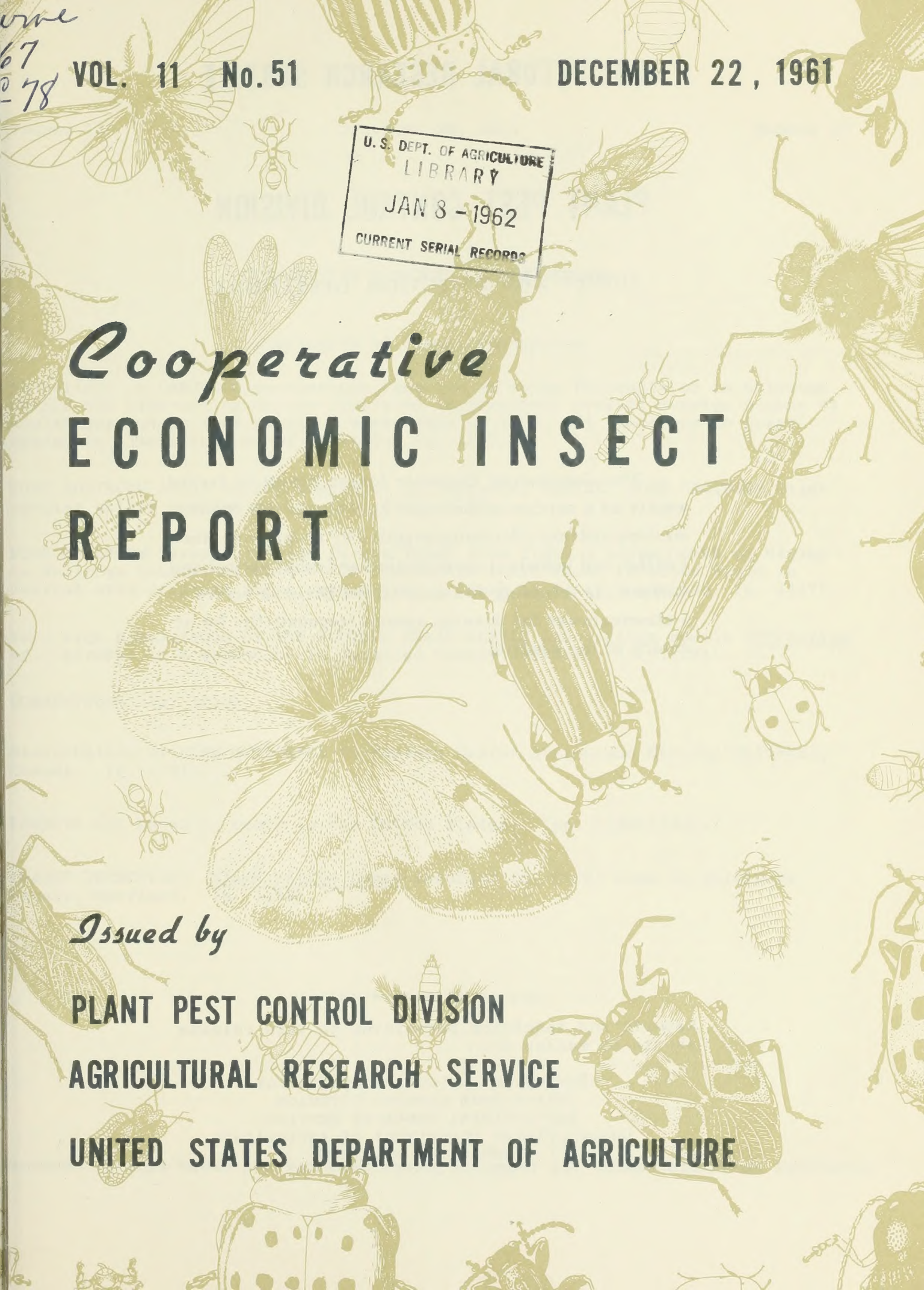

VOL. 11 No. 51 DECEMBER 22, 1961

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Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 11 December 22, 1961 Number 51

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

No buildup of GREENBUG populations reported in Texas Panhandle or in Oklahoma. CHINCH BUG hibernation survey completed in Arkansas; overall average number of adults per square foot nearly 3 times that of 1960, but there was no great change in classification of counties. (p. 1117).

CORN ROOTWORM adult survey completed in Nebraska; WESTERN CORN ROOTWORM major species within problem area. (pp. 1117, 1120).

PINK BOLLWORM larva collected in gin trash from field 3 miles north of Higley in Maricopa County, Arizona; this represents third known infested field in central area of State where eradication program is being conducted. (p. 1117).

Very high populations of SAW-TOOTHED GRAIN BEETLE and a flour beetle (Tribolium sp.) present in a warehouse in Coconino County, Arizona. (p. 1119).

CORRECTIONS (p. 1119).

Distribution of PINE BUTTERFLY in Western United States and British Columbia, Canada. (p. 1121).

INSECTS not known to occur in the United States. (pp. 1122-1124).

INSECT DETECTION: Black citrus aphid recorded for first time in Baltimore County, Maryland. (p. 1118).

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Reports in this issue are for week ending December 15, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

MID-DECEMBER 1961 TO MID-JANUARY 1962

The Weather Bureau's 30-day outlook for the period mid-December to mid-January calls for temperatures to average below seasonal normals over the western two-thirds of the Nation, with greatest unseasonal departures over the Western Plateau region and Central Plains. Above normal temperatures are predicted east of the Appalachians and in the east Gulf States. In the remaining zone, about normal temperatures are predicted. Precipitation is expected to exceed normal over the eastern half of the Nation, exclusive of the Atlantic seaboard, where near or subnormal amounts are indicated. Greater than normal amounts are also predicted for the Far Southwest. Below normal precipitation is anticipated for the Pacific Northwest. In other unspecified areas, about normal amounts are forseen. Owing to the coldness expected to prevail over western portions of the country, the extensive snow cover currently present there should be replenished from time to time.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price $4.80 a year, $2.40 a half year.

WEATHER OF THE WEEK ENDING DECEMBER 18

The weather was unusually cold in the central and far western parts of the Nation for the second consecutive week. Temperatures averaged 12° to 24° below normal for the week in much of the Great Plains and Rocky Mountain areas. Subzero minima early in the week extended southward to the Texas Panhandle, and freezing into the southern irrigated valleys of Arizona and to the Laredo-Corpus Christi line in Texas. In Kansas, the extreme cold set several new low-temperature records, including -26° at Kirwin on the 13th which equaled the lowest ever recorded in the State during December, and a new December low of -12° for Topeka. One of the lowest temperatures reported during the week was -41° at Alamosa, Colorado.

The cold weather reached the Northeast later in the week, and minima fell to subzero levels in northern New York and New England and in the mountains as far south as West Virginia. Temperatures for the week, however, averaged near normal in the Northeast and above in the Southeast. The week was 6° to 12° warmer than normal in Florida.

Precipitation was unusually heavy in south-central areas for the second consecutive week and caused severe flooding in Mississippi and Alabama. In Mississippi, rainfall for the week generally totaled about 4 inches in the north and up to 15 inches locally in the south. A few tornadoes occurred in Mississippi on the 11th. Heavy rains fell in northwestern Florida but, in general, the Peninsula remains dry.

Precipitation fell as snow in the North and most of the Far West. The snowpack was substantially increased in the Cascades and the Rocky Mountains. Snow now covers the ground in central areas as far south as Kansas, northern Missouri and northern Illinois, with depths exceeding a foot locally. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - TEXAS - Freezing rain and snow in panhandle area prevented any increases in light population. No threatening populations reported during week. (Texas Coop. Rpt.). OKLAHOMA - Light and rather localized infestations continue to be reported from several wheat-growing areas of State. Populations in Tillman County ranged 6-10 per linear foot; none found in Tonkawa and Goodwell areas. Severe cold and icy weather throughout State reduced activity considerably. (Okla. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Light, 2-3 per linear foot, on wheat in Tillman County. (Okla. Coop. Sur.).

CHINCH BUG (Blissus leucopterus) - ARKANSAS - Results of 1961 survey show more adults in hibernation than at same time in 1960. Ratings (number of bugs per square foot), as compared with 1959 and 1960, were as follows: Severe (1,000-2,000) - 3 counties in 1961, 1 in 1959; moderate (500-1,000) - 1 county in 1961, 2 each in 1959 and 1960; light (250-500) - 1 county each in 1961, 1960 and 1959; noneconomic (0-250) - 13 counties in 1961, 15 in 1960 and 14 in 1959. Counties with severe ratings in 1961 were Lawrence, Randolph and Clay where counts were 1,845, 1,185 and 1,486 bugs per square foot, respectively. Although there was no great change in the classification of counties from 1960 to 1961, the overall average number of adults per square foot in 1961 is nearly 3 times what it was in 1960. In general, the counties in the extreme northeastern area continued to have the largest counts. (Ark. Ins. Sur.). OKLAHOMA - Light infestations noted in localized area on wheat and barley in Wagoner County before onset of severe cold. (Okla. Coop. Sur.).

CORN ROOTWORMS (Diabrotica spp.) - NEBRASKA - The 1961 adult survey completed. Map on page 1120 gives locations of species dominating (more than 50 percent of population) in corn areas of State. Within problem area, nearly 100 percent of adults collected were western corn rootworm (D. virgifera). It is within this problem area that most of soil insecticides used in 1960-1961 did not result in satisfactory control. (Bergman).

PEA APHID (Macrosiphum pisi) - TEXAS - Slightly decreased in Burleson County; averaged 30 per 5 sweeps. (Newton).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Populations continue to decline in Burleson County; adults 25 per 5 sweeps. (Newton).

ALFALFA WEEVIL (Hypera postica) - UTAH - Adults numerous in margin litter of alfalfa fields at Salt Lake City, Logan and Brigham. (Knowlton).

TRUCK CROP INSECTS

CABBAGE APHID (Brevicoryne brassicae) - ARIZONA - Heavy infestations present on untreated central area cole crops. (Ariz. Coop. Sur.).

GREEN PEACH APHID (Myzus persicae) - ARIZONA - Medium to heavy populations present on following hosts at Mesa Experiment Station Farm: Turnip, spinach, radish, Swiss chard, beets and carrots. (Ariz. Coop. Sur.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Single larva taken in gin trash on December 8 from field 3 miles north of Higley in Maricopa County. This represents third known infested field in central area where the eradication program is being conducted. (Ariz. Coop. Sur.). OKLAHOMA - Lint cleaner inspections by county were as follows: Comanche - 2 inspections, 15 larvae; Cotton - 3 inspections, 29 larvae; Tillman - 13 inspections, 2 larvae; Wagoner - 2 inspections, 1 larva. Three inspections in Custer County, 1 in Dewey County and 2 each in Kiowa and Roger Mills Counties were negative. (Okla. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BARK BEETLES - CALIFORNIA - *Dendroctonus monticolae*, *D. brevicomis* and *Ips* spp. exhibiting an upsurge of activity in the Reds Hill logging unit of Tule River Indian Reservation, Tulare County. Causing complete kill and new fades in ponderosa and sugar pine poles and young saw timber on a 700-acre stand. Single trees, and groups up to 16, affected. (K. E. Englebretson).

AN OLETHREUTID (*Epinotia subvirdis*) - CALIFORNIA - Medium local infestation on juniper in Oceanside, San Diego County. (Cal. Coop. Rpt.).

DEODAR WEEVIL (*Pissodes nemorensis*) - MARYLAND - Larvae seriously damaged a white pine at Forest Hill, Harford County. (U. Md., Ent. Dept.).

A SCALE INSECT (*Pinnaspis aspidistrae*) - VIRGINIA - Infesting Africanviolets in a home in Quinton, New Kent County. (Amos, Dec. 7).

CACTUS SCALE (*Diaspis echinocacti*) - VIRGINIA - Infesting cacti locally in Newport News. (Amos, Stump; Dec. 1).

CYCLAMEN MITE (*Steneotarsonemus pallidus*) - VIRGINIA - Infesting Africanviolet in home in Amherst, Amherst County. (Amos, Burk; Dec. 4).

BLACK CITRUS APHID (*Toxoptera aurantii*) - MARYLAND - Collected from Chinese holly at Overlea, Baltimore County, on October 5. Det. by L. M. Russell. This is a new county record; previously known in State only from Eastern Shore. (U. Md., Ent. Dept.).

FLORIDA WAX SCALE (*Ceroplastes floridensis*) - FLORIDA - Collected on Chinese holly at Gainesville, Alachua County, on December 9 by L. A. Hetrick; populations extremely abundant on a single, large tree. (Fla. Coop. Sur.).

A WAX SCALE (*Ceroplastes* sp.) - VIRGINIA - Infesting Burfordi holly locally at Petersburg, Dinwiddie County, and camellia in Cheriton, Northampton County. (Amos, Minson; Dec. 7-8).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (*Hypoderma* spp.) - UTAH - Eighty cattle treated in Weber County using a pour-on method. (Knowlton). OKLAHOMA - Populations of *H. lineatum* larvae 0-15 in backs of 300-450 pound calves in Garvin County; also reported from Pushmataha, Choctaw, Ellis and Cotton Counties. (Okla. Coop. Sur.).

FACE FLY (*Musca autumnalis*) - VIRGINIA - This species and *Pollenia rudis* getting into a home in great numbers in Marion, Smyth County, on December 1. Of 23 specimens received for determination, 20 were *P. rudis*. (Turner, Eller).

WINTER TICK (*Dermacentor albipictus*) - TEXAS - Light infestations on horses in Burnet County area. (Texas Coop. Rpt.).

LICE - UTAH - Total of 1,100 cattle sprayed in Iron County. Lice generally moderate in abundance; occasionally numerous in Iron County area. (Knowlton, Sjoblom). OKLAHOMA - Some activity noted in Ottawa and Ellis Counties on cattle. (Okla. Coop. Sur.).

STORED-PRODUCT INSECTS

SAW-TOOTHED GRAIN BEETLE (*Oryzaephilus surinamensis*) - ARIZONA - Very high population in a warehouse containing sacked, rolled milo at Tuba City in Coconino County; *Tribolium* sp. also very heavy at same location. (Ariz. Coop. Sur.).

MISCELLANEOUS INSECTS

OLD-HOUSE BORER (*Hylotrupes bajulus*) - MARYLAND - Larvae infesting basement rafters of a home at Baltimore. (U. Md., Ent. Dept.).

DRUG-STORE BEETLE (*Stegobium paniceum*) - MARYLAND - Adults numerous in basement of a home at Bel Air, Harford County. (U. Md., Ent. Dept.).

GREENHOUSE STONE CRICKET (*Tachycines asynamorus*) - MARYLAND - Two adult females in basement of a building at Salisbury, Wicomico County. (U. Md., Ent. Dept.).

CLOVER MITE (*Bryobia praetiosa*) - VIRGINIA - Nuisance in homes in Roanoke, Roanoke County, and Stuart, Patrick County. (Cagle, Rowell, Tarpley, Olinger; Dec. 7-9).

MILLIPEDS - VIRGINIA - Invading homes locally in Smyth County (Nov. 4), Augusta County (Dec. 6) and Loudoun County (Dec. 5). (Rowell, Morse).

CORRECTIONS

CEIR 11(49):1097 - A JUNE BEETLE (*Cotinis texana*) - CALIFORNIA - Delete note.

CEIR 11(50):1111 - Additional Light Trap Collections: *Feltia annexa* should be *Feltia subterranea*.

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. ips.	Perid. saucia	Prod. ornith.	Laphyg. frug.	Trich. ni	Feltia subter.	Helio. zea
ARIZONA								
Mesa 12/7-13			1				19	
FLORIDA								
Quincy 12/4		1		1	2		1	
Gainesville 12/12	2	1		5			6	
TEXAS								
*Brownsville 12/2-8	54	31	54	6	63	10	42	4

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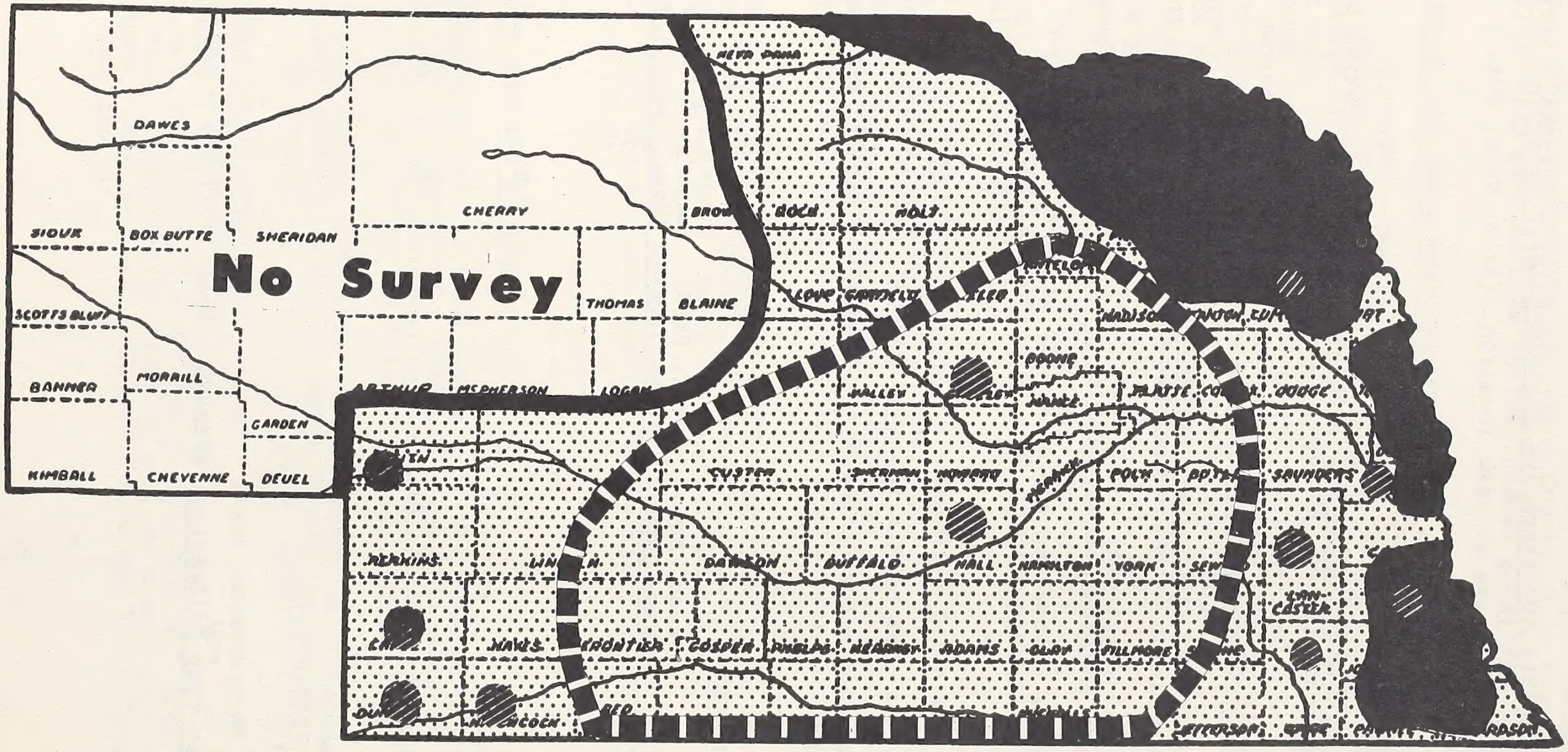
* Five traps - Brownsville.

Additional Light Trap Collection: ARIZONA - Mesa (12/7-13) - *Spodoptera exigua* - 12.

NEBRASKA CORN ROOTWORM SURVEY - 1961

(See corn rootworm note on page 1117)



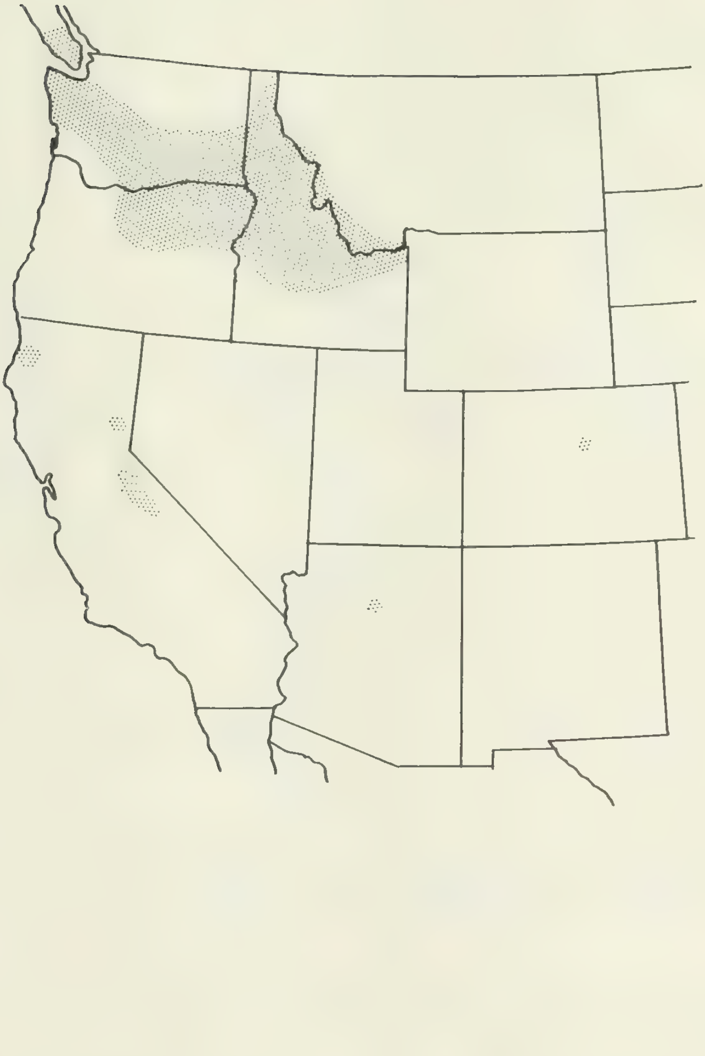
▒ Western corn rootworm (Diabrotica virgifera)

■ Northern corn rootworm (Diabrotica longicornis)

▨ Southern corn rootworm (Diabrotica undecimpunctata howardi)

▬▬▬ Problem area

DISTRIBUTION OF PINE BUTTERFLY (*Neophasia menapia* (Felder & Felder)) IN THE WESTERN UNITED STATES AND BRITISH COLUMBIA, CANADA



From Forest Pest Leaflet 66
Forest Service, USDA
November 1961

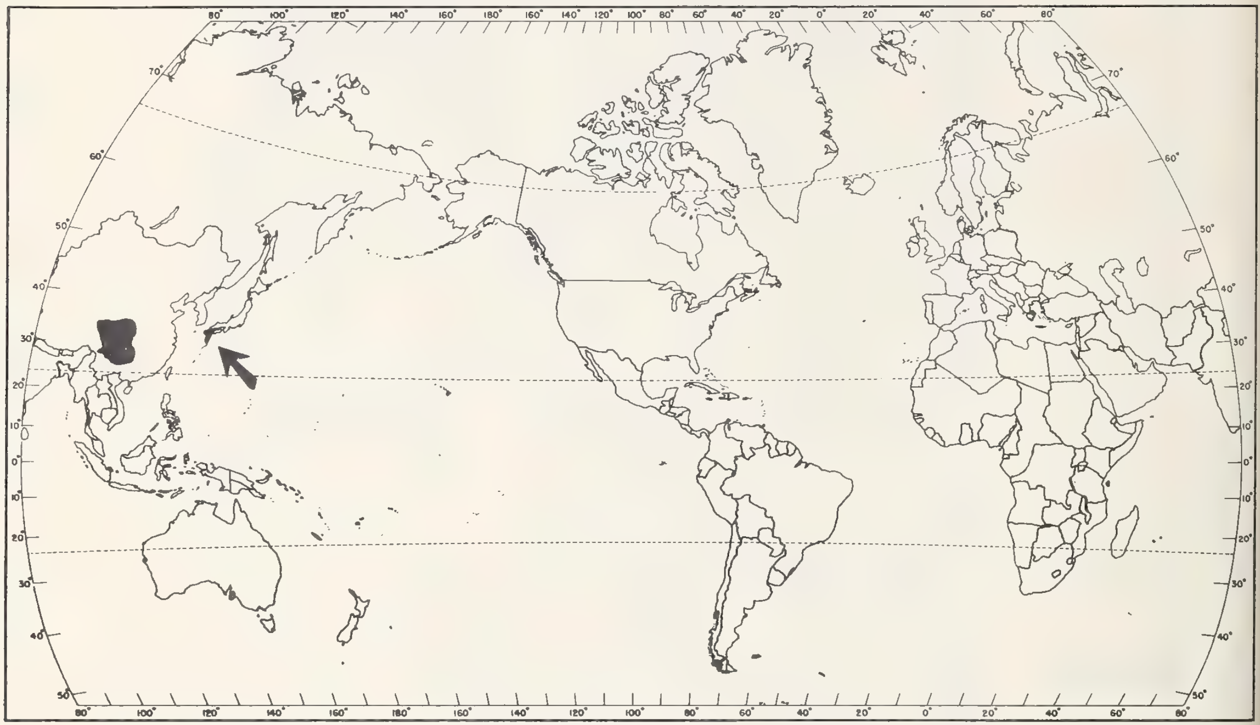
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

JAPANESE ORANGE FLY (_Dacus tsuneonis_ Miyake)

Economic Importance: This tephritid, described by Tsunekata Miyake in 1919, is one of the most important pests of citrus in Japan. In that country, it is found only in Kyushu and on Amami-O-shima Island. Extensive outbreaks have occurred in some commercial citrus areas since 1947 when up to 60 percent or more of the fruits were infested. In Szechwan Province of southwestern China, the fruit fly has also been reported to have infested 50 percent of the oranges at Kiangtsin during 1940.

Distribution: Japan (Kyushu and Amami-O-shima Island) and southwestern China (Szechwan and Kweichow Provinces).

Hosts: Citrus, including orange, grapefruit and mandarin orange.



General Distribution of _Dacus_ _tsuneonis_ Miyake

Life History and Habits: The biology as studied in Japan is as follows: Adult emergence dates vary from place to place, but detailed studies show that the emergence period covers about 50 days from the beginning of June to the middle of July. They are occasionally found as late as October, however. The length of the preoviposition period of the adults reared under field laboratory conditions was between 17 and 25 days. The ratio of males to females was one to one. It appears that copulation is of frequent necessity with the females that are freely ovipositing, and copulation probably takes place after depositing each batch of eggs. The adults feed on honeydew excreted by various species of aphids, coccids and psyllids, which appears necessary for health, longevity and

(Tephritidae, Diptera)

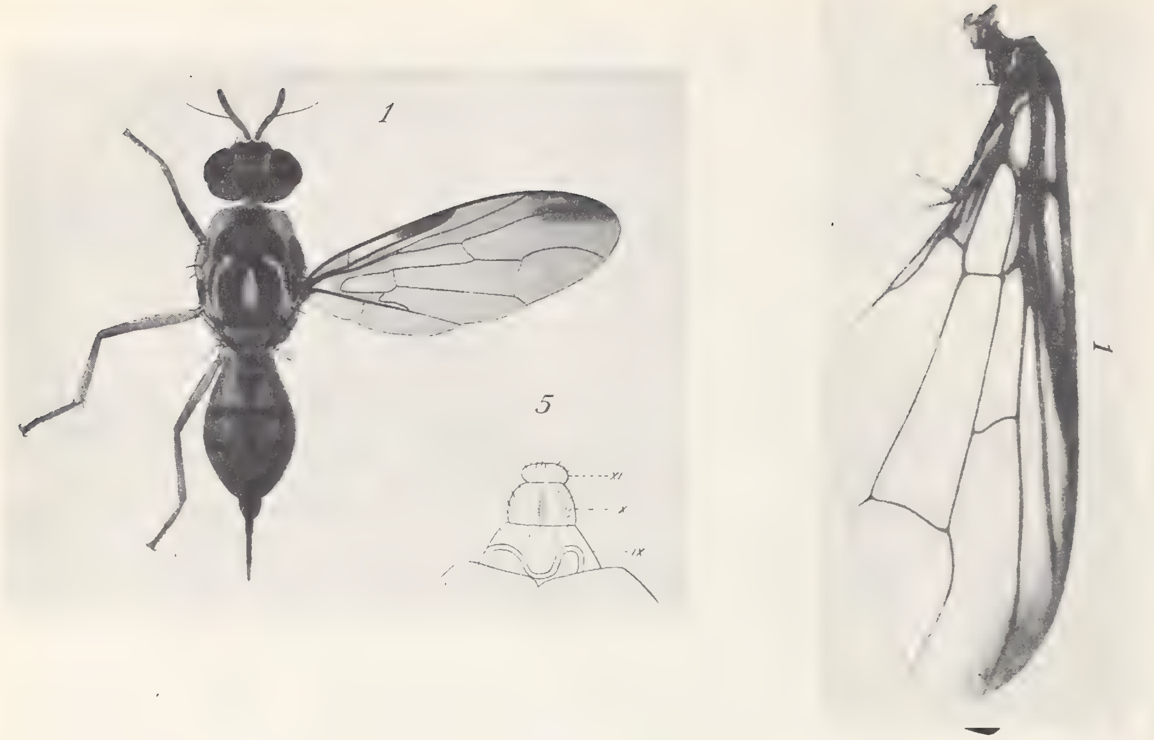
No. 141 of Series

egg production, during the preoviposition period. Flies are usually found in shady, thickly wooded places. Eggs are laid under the rind, with thick-skinned fruit being seldom attacked. A single puncture is usually made in each infested fruit. Although frequently 2-6 eggs may be found in each puncture, only one larva emerges from the puncture. Larvae appear about the first of October and devour the contents of one carpel after another, from 2-10 carpels being infested by a single maggot. The larva is mature by the beginning of November and usually the infested fruit falls to the ground. The larva leaves the fruit and enters the ground for pupation within a few hours after the fruit drops. Occasionally the larva leaves the fruit on the tree. Pupation occurs 1-2 inches in the soil.

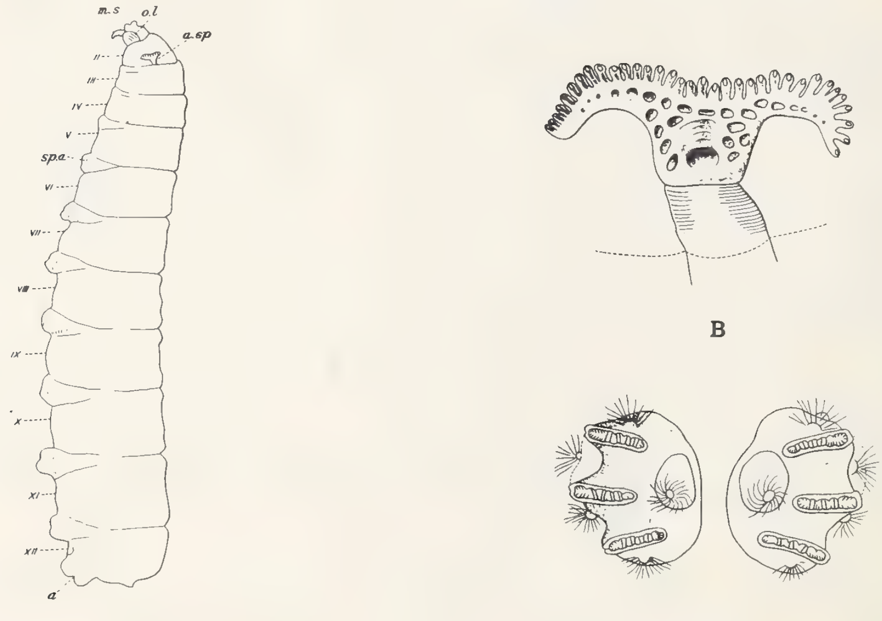
Description: ADULTS - Conspicuously large; female 11 mm. long (excluding ovipositor) and wing expanse 10 mm.; male slightly smaller. Head yellow or ochraceous; ocellar triangle black. Two shiny black, claviform spots on clypeus; a small subtriangular piceous spot in middle of each gena, just below lower margin of eye. Antennae ochraceous, arista piceous, with yellow base. Proboscis with a piceous ridge at base mottled with brown; palpi yellow. Thorax densely punctate, with short, yellowish pubescence, ferrugino-ochraceous; a medium longitudinal, λ-shaped purplish testaceous streak on dorsum, terminating posteriorly in center of the scutum; a pair of rather faint submedian, more or less wavy, purplish testaceous lines, interrupted at transverse suture and united posteriorly with posterior branches of λ-shaped streak; a yellowish patch on each humeral callus; scutellum yellowish, with 2 bristles; median plate of scutellum ochraceous; most of lateral sides of thorax ochraceous. Halteres ochraceous. Legs ochraceous, with yellow pubescence. Wings hyaline, with more or less grayish tinge; veins fusco-ochraceous; area between veins R_1 and R_{4+5} tinged with honey-yellow; radial cell at region above the medial and cubital cells also honey-yellow; a fuscous suffusion at apex of wing; second auxillary lobe wanting in male. Abdomen oval, as broad as thorax, densely punctate, bright ochraceous above, yellowish beneath and brownish at end, with a short, yellowish pubescence; a longitudinal median black, rather broad, streak extends length of abdomen, or almost so; transverse bands present on third, fourth and sometimes the fifth segment, band on the third segment cross-marking longitudinal streak. EGG - Length 1.4 mm.; width 0.3 mm. Creamy white and fusiform in shape, obtusely rounded at one end and rather pointed at the other. Two small elevations on shell at obtuse end. LARVA - Creamy white, with slight yellowish tinge. Length 12-13 mm.; width 3 mm. at broadest part. Body elongated, cylindrical, pointed at anterior apex. Anterior spiracles each with numerous lobes, each provided with an elliptic aperture at tip. Posterior spiracles located dorsally on posterior surface of 12th segment; they appear as paired elliptic chitinous plates, each of which has 3 transverse apertures, the middle one of which is placed slightly external to the others. Each aperture elongate-elliptic, guarded by a chitinous border which bears many inwardly directed fine hairs and shows internally many partitions, owing to presence of some chitinous rods that lie across the aperture. Around each spiracle lie five groups of radiating flat hairs, some of which are branched, each arising from a small, round tubercle. In internally placed groups, hairs appear whirled around their respective tubercles. PUPARIUM - Elliptical, about 10 mm. long and 4 mm. wide, ochraceous in color. (Prepared in Survey and Detec-Operations, in cooperation with other ARS agencies). CEIR 11 (51):12-22-61.

(See page 1124 for illustrations)

Major references: 1. Chen, S. H. 1940. Sinensia (Nanking) 11 (1/2):131-135. 2. Miyake, T. 1919. Imperial Cent. Agr. Expt. Sta. Bul. (Tokyo) 2(2):85-165, illus. in Engl. 3. Sun, C-y., Du, I-l., and Liao, Y-m. 1958. Acta Oecon. Ent. Sinica (Peking) 1(2): 175-187. In Chin., Engl. Sum. 4. Yasumatsu, K. and Nagatomi, A. 1959. Kyushu Univ. Faculty of Agr. Sci. Bul. 17(2):129-146. In Jap., Engl. Sum.



Adult Female and Wing of *Dacus tsuneonis* Miyake



A

B

C

Larva of *D. tsuneonis* Miyake (A). Anterior Spiracle (B) and Posterior Spiracles (C)

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